



# STANDBY GENERATORS

# 20 kW

## Air-Cooled Gas Engine Generator Sets

Continuous Standby Power Rating

Model 05744 (Aluminum - Gray) - 20 kW 60Hz

### INCLUDES:

- True Power® Electrical Technology
- Two Line LCD Digital Controller
- Electronic Governor
- 200 Amp Service Entrance Rated Automatic Transfer Switch
- External Main Circuit Breaker, System Status & Maintenance Interval LED's and GFCI Duplex Outlet
- Flexible Fuel Line Connector
- Composite Mounting Pad
- Natural Gas or LP Gas Operation
- UL 2200 Listed



## QUIET TEST™

## FEATURES

- **INNOVATIVE DESIGN & PROTOTYPE TESTING** are key components of GENERAC'S success in "IMPROVING POWER BY DESIGN." But it doesn't stop there. Total commitment to component testing, reliability testing, environmental testing, destruction and life testing, plus testing to applicable CSA, NEMA, EGSA, and other standards, allows you to choose GENERAC POWER SYSTEMS with the confidence that these systems will provide superior performance.
- **TRUE POWER® ELECTRICAL TECHNOLOGY:** Superior harmonics and sine wave form produce less than 5% Total Harmonic Distortion for utility quality power. This allows confident operation of sensitive electronic equipment and micro-chip based appliances, such as variable speed HVAC.
- **TEST CRITERIA:**
  - ✓ PROTOTYPE TESTED
  - ✓ SYSTEM TORSIONAL TESTED
  - ✓ NEMA MG1-22 EVALUATION
  - ✓ MOTOR STARTING ABILITY
- **SOLID-STATE, FREQUENCY COMPENSATED VOLTAGE REGULATION.** This state-of-the-art power maximizing regulation system is standard on all Generac models. It provides optimized FAST RESPONSE to changing load conditions and MAXIMUM MOTOR STARTING CAPABILITY by electronically torque-matching the surge loads to the engine.
- **SINGLE SOURCE SERVICE RESPONSE** from Generac's dealer network provides parts and service know-how for the entire unit, from the engine to the smallest electronic component.
- **GENERAC TRANSFER SWITCHES.** Long life and reliability are synonymous with GENERAC POWER SYSTEMS. One reason for this confidence is that the GENERAC product line includes its own transfer systems and controls for total system compatibility.

# GENERAC®

# FEATURES

## Guardian Standby Generator - 20 kW

ENGINE	<ul style="list-style-type: none"> <li>•Generac (OHVI) Design</li> </ul>	Maximizes engine “breathing” for increased fuel efficiency. Plateau honed cylinder walls and plasma moly rings help engine run cooler, reducing oil consumption. Because heat is the primary cause of engine wear, the OHVI has a significantly longer life than competitive engines.
	<ul style="list-style-type: none"> <li>•”Spiny-lok” cast iron cylinder walls</li> </ul>	Rigid construction and added durability provide long engine life.
	<ul style="list-style-type: none"> <li>•Electronic ignition/spark advance</li> </ul>	These features combine to assure smooth, quick starting every time.
	<ul style="list-style-type: none"> <li>•Full pressure lubrication system</li> </ul>	Superior lubrication to all vital bearings means better performance, less maintenance and significantly longer engine life. Now featuring a 2 year/200 hour oil change interval.
	<ul style="list-style-type: none"> <li>•Low oil pressure shutdown system</li> </ul>	Superior shutdown protection prevents catastrophic engine damage due to low oil.
	<ul style="list-style-type: none"> <li>•High temperature shutdown</li> </ul>	Prevents damage due to overheating.
GENERATOR	<ul style="list-style-type: none"> <li>•Revolving field</li> </ul>	Allows for smaller, light weight unit that operates 25% more efficiently than a revolving armature generator.
	<ul style="list-style-type: none"> <li>•Skewed stator</li> </ul>	Produces a smooth output waveform for compatibility with electronic equipment.
	<ul style="list-style-type: none"> <li>•Displaced phase excitation</li> </ul>	Maximizes motor starting capability.
	<ul style="list-style-type: none"> <li>•Automatic voltage regulation</li> </ul>	Regulates the output voltage to ±2% prevents damaging voltage spikes.
	<ul style="list-style-type: none"> <li>•UL 2200 Listed</li> </ul>	For your safety
CONTROLS	<ul style="list-style-type: none"> <li>•Manual/Auto/Off switch</li> </ul>	Selects the operating mode.
	<ul style="list-style-type: none"> <li>•Utility voltage sensing</li> </ul>	Constantly monitors utility voltage, setpoints 65% dropout, 75% pick-up, of standard voltage.
	<ul style="list-style-type: none"> <li>•Utility interrupt delay</li> </ul>	Prevents nuisance start-ups of the engine, adjustable 10-30 seconds.
	<ul style="list-style-type: none"> <li>•Engine warm-up</li> </ul>	Ensures engine is ready to assume the load, setpoint approximately 10 seconds.
	<ul style="list-style-type: none"> <li>•Engine cool-down</li> </ul>	Allows engine to cool prior to shutdown, setpoint approximately 1 minute.
	<ul style="list-style-type: none"> <li>•Seven day exerciser</li> </ul>	Operates engine to prevent oil seal drying and damage between power outages.
	<ul style="list-style-type: none"> <li>•Timed Trickle Battery charger</li> </ul>	Maintains battery charge level to insure starting.
	<ul style="list-style-type: none"> <li>•Main Line Circuit Breaker</li> </ul>	Protects generator from overload.
UNIT	<ul style="list-style-type: none"> <li>•Electronic governor</li> </ul>	Maintains constant 60 Hz frequency.
	<ul style="list-style-type: none"> <li>•Weather protective enclosure</li> </ul>	Ensures protection against mother nature. Hinged key locking roof panel for security. Lift-out front for easy access to all routine maintenance items. Electrostatically applied textured epoxy paint for added durability.
	<ul style="list-style-type: none"> <li>•Enclosed critical grade muffler</li> </ul>	Quiet, critical grade muffler is mounted inside the unit to prevent injuries.
INSTALLATION SYSTEM	<ul style="list-style-type: none"> <li>•Small, compact, attractive</li> </ul>	Makes for an easy, eye appealing installation.
	<ul style="list-style-type: none"> <li>•1’ Flexible Fuel Line Connector</li> <li>•Composite Mounting Pad</li> </ul>	Easy Installation

# SPECIFICATIONS

**GENERAC®**

GENERATOR		Model 05744 (20 kW)
Rated Maximum Continuous Power Capacity (LP)		20,000 Watts*
Rated Maximum Continuous Power Capacity (NG)		18,000 Watts*
Rated Voltage		120/240
Rated Maximum Continuous Load Current 240 Volts		83.3 LP/75 NG
Total Harmonic Distortion		Less than 5%
Main Line Circuit Breaker		100 Amp
Phase		1
Number of Rotor Poles		2
Rated AC Frequency		60Hz
Power Factor		1
Battery Requirement (not included)		Group 26R 12 Volts and 525 Cold-cranking Amperes Minimum
Unit Weight		451 Pounds
Dimensions (L" x W" x H")		48 x 25 x 29
Sound output in dB(A) at 23 ft. with generator operating at normal load		66
Sound output in dB(A) at 23 ft. with generator in Whisper-Test™ low speed exercise mode		60
ENGINE		Model 05744 (20 kW)
Type of Engine		GENERAC OHVI V-TWIN
Number of Cylinders		2
Rated Horsepower		36 @ 3,600 rpm
Displacement		999cc
Cylinder Block		Aluminum w/Cast Iron Sleeve
Valve Arrangement		Overhead Valve
Ignition System		Solid-state w/Magneto
Governor System		Electronic
Compression Ratio		9.5:1
Starter		12 Vdc
Oil Capacity Including Filter		Approx. 1.9 Qts.
Operating RPM		3,600
Fuel Consumption		
Natural Gas	cu.ft./hr.	
	1/2 Load	
	Full Load	206
Liquid Propane	ft <sup>3</sup> /hr (gal/hr)	
	1/2 Load	69 (1.89)
	Full Load	106 (2.90)
Required fuel pressure to generator fuel inlet at all load ranges - 5 to 7 inches of water column for natural gas, 11 to 14 inches of water column for LP gas		
CONTROLS		
2-Line Plain Text LCD Display		Simple user interface for ease of operation
Mode Switch		
-Auto		Automatic Start on Utility failure. 7 day exerciser
-Off		Stops unit. Power is removed. Control and charger still operate.
-Manual/Test (start)		Start with starter control, unit stays on. If utility fails, transfer to load takes place.
Engine Start Sequence		Cyclic cranking: 16 sec. on, 7 rest (90 sec. maximum duration)
Engine Warm-up		10 seconds
Engine Cool-Down		1 minute
Starter Lock-out		Starter cannot re-engage until 5 sec. after engine has stopped.
2.5 Amp Timed Trickle Battery Charger		Standard
Automatic Voltage Regulator w/Overvoltage Protection		Standard
Automatic Low Oil Pressure Shutdown		Standard
Overspeed Shutdown		Standard, 72Hz
High Temperature Shutdown		Standard
Overcrank Protection		Standard
Safety Fuse		Standard

Rating definitions - Standby: Applicable for supplying emergency power for the duration of the utility power outage. No overload capability is available for this rating. (All ratings in accordance with BS5514, ISO3046 and DIN6271). \* Maximum wattage and current are subject to and limited by such factors as fuel Btu content, ambient temperature, altitude, engine power and condition, etc. Maximum power decreases about 3.5 percent for each 1,000 feet above sea level; and also will decrease about 1 percent for each 12° C (10° F) above 15.5° C (60° F).

# Guardian Standby Generator - 20 kW

TRANSFER SWITCH & PRIORITY LOAD CENTER	Model RTSE200A3
No. of Poles	2
Current Rating (amps)	200
Voltage Rating (VAC)	250
Utility Voltage Monitor (fixed)	
-Pick-up	75%
-Dropout	65%
Return to Utility	approx. 13 sec.
Exerciser weekly for 12 minutes	Standard
UL Listed	Standard
Enclosure Type	NEMA 3R
Withstand Rating (Amps)	10,000
Lug Range	400MCM - #4
External Dimensions (H" x W" x D")	
inches	30 x 16 x 7.1
mm	762 x 407 x 180

## Transfer Switch Features

- Electrically operated, mechanically-held contacts for fast, clean connections.
- Rated for all classes of load, 100% equipment rated, both inductive and resistive.
- Dual coil design.
- Service Entrance Rated
- NEMA 3R aluminum outdoor enclosure.
- Main contacts are silver plated or silver alloy to resist welding and sticking.

